



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,242	01/19/2001	George Wong	CS98-070B	8930

7590 06/13/2002  
George O. Saile  
20 McIntosh Drive  
Poughkeepsie, NY 12603

EXAMINER

DIAZ, JOSE R

ART UNIT PAPER NUMBER

2815

DATE MAILED: 06/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/764,242

Applicant(s)

WONG, GEORGE

Examiner

José R. Díaz

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Copy original drawings*.

## DETAILED ACTION

### *Drawings*

➤ The drawings are objected to because Figures 1-2 are new drawings, which were not presented in the disclosure of the parent application. Applicant is reminded that a later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming **only subject matter disclosed in an earlier or parent application** is known as a divisional application or "division." The divisional application should set forth only that portion of the earlier disclosure which is germane to the invention as claimed in the divisional application (see MPEP 201.06). The Figures 1 and 2 that Applicant attached to the last response filed on March 14, 2002 are not the same as the Figures 1 and 2 filed on the Application. See copy of the drawings provided in this communication.

### ***Claim Rejections - 35 USC § 102***

➤ The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

➤ Claims 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Saitou et al. (US Patent No. 5,739,546).

Regarding claim 18, Saitou et al. teach a semiconductor device (see cols, 1-8) comprising a multilevel structure (see col. 6, lines 61-67 and col. 7, lines 1-3), wherein each level is comprised of a patterned conducting layer (10) formed in areas in which integrated circuits will be formed (2) and a patterned fill layer (6) formed in kerf areas or scribe lines (3), an oxide layer (7), and an insulating layer (9) (see Figs. 1-2).

Regarding claim 19, Saitou et al. teach that said patterned conducting layer is a metal (see col. 3, lines 10-16 and 22-25).

### ***Claim Rejections - 35 USC § 103***

➤ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

➤ Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saitou et al. (US Patent No. 5,739,546) in view of Lou (US Patent No. 5,759,906).

Regarding claim 20, Saitou et al. fails to teach that said patterned conducting layer is aluminum having a thickness of about 6000-10000 Å. However, Lou teaches that it is well known in the art to form an aluminum of about 6000 Å as the patterned conducting layer in the areas in which integrated circuits will be formed (see col. 5, lines 34-39 and Figs. 3-11). Therefore, it would have been obvious to one having ordinary

skill in the art at the same time the invention was made to modify Saitou et al. to include a patterned conducting layer of aluminum having a thickness of about 6000-10000 Å. The ordinary artisan would have been motivated to modify Saitou et al. in the manner described above for at least the purpose of providing a high electrical conductivity.

➤ Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saitou et al. (US Patent No. 5,739,546).

Regarding claim 21, Saitou et al. teach that is well known in the art to form the patterned fill layer (6) close to the patterned conducting layer (10, 11), and wherein such layers are or are not separated by a space (see Figs. 1-3). Therefore, it would have been obvious to one having ordinary skill in the art at the same time the invention was made to modify Saitou et al. to include a space between the patterned fill layer and the patterned conducting layer of about 2 micrometers or less. The ordinary artisan would have been motivated to modify Saitou et al. in the manner described above for at least the purpose of achieving a high integration of chip regions within a wafer. Furthermore, it would have been obvious to one of ordinary skill in the art, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 22, Saitou et al. fails to teach a width of about 120-600 micrometers. However, Saitou et al. teach that the width of the kerf area must be narrow in order to achieve a high integration of chip regions within a wafer (see col. 1, lines 29-31). Therefore, it would have been obvious to one having ordinary skill in the art at the

Art Unit: 2815

same time the invention was made to modify Saitou et al. to include the limitation of narrowing the width of the kerf area to about 120-600 micrometers. The ordinary artisan would have been motivated to modify Saitou et al. in the manner described above for at least the purpose of achieving a high integration of chip regions within a wafer. Furthermore, it would have been obvious to one of ordinary skill in the art to provide a kerf area having a width of about 120-600 micrometers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

### ***Response to Arguments***

➤ Applicant's arguments with respect to claims 18-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (703) 308-6078. The examiner can normally be reached on 9:00 - 5:00 Monday, Tuesday, Thursday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (703) 308-1690. The fax phone numbers

Art Unit: 2815

for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 746-3891 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JRD  
June 10, 2002

A handwritten signature in black ink, appearing to read 'Eddie Lee', with a large, sweeping initial 'E'.

EDDIE LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800